

Detailed Methodology

The History and Development of the CAHPS Survey

The questionnaire used for the Medicaid CAHPS survey is part of a group of surveys developed by a consortium of researchers lead by Research Triangle Institute (RTI), the Rand Corporation, and Harvard Medical School under a cooperative agreement between HCFA and the Agency for Health Care Policy and Research (AHCPR), a component of the US Public Health Service.

In 1994, AHCPR funded the Survey Development Project. In this study, the researchers reviewed existing research on consumer assessments of health plans, reviewed existing surveys developed to assess consumers' ratings of health plans, and, based on information from these reviews, developed and conducted preliminary tests of survey items that could be useful in further consumer assessments of health plans.

The researchers found that, although there was an extensive body of work on health plan assessments, they were all developed from the perspective of health plans or group purchasers – there was little focus directly on the consumer point of view. Also, most surveys were developed to be used only within a single type of plan or service delivery system, such as a staff model HMO setting. Few surveys were designed to apply to a full range of health care plans or populations. Lastly, the researchers found that most existing surveys had not been subjected to current, state-of-the-art testing of validity and reliability.

In October 1995, AHCPR announced a new initiative to build on the experience and findings of the Survey Development Project. The overall goal of this new Consumer Assessment of Health Plans Study (CAHPS) was to provide an integrated set of carefully tested and standardized questionnaires and report formats that could be used to collect and report meaningful and reliable information about the health plans. The CAHPS products were intended to be used with all types of health insurance consumers (including Medicaid recipients, Medicare beneficiaries, and those who are commercially insured) across the full range of health care delivery systems.

The CAHPS development team had the following goals:

- develop standard questionnaires, data collection protocols, analysis methods, and reports that can be used across sponsors and types of health plans;
- develop and test questionnaires that collect information on consumers' experiences and assessments of health plans and services;
- develop and test different reporting formats for conveying this information;
- design and implement an evaluation of CAHPS protocol and products; and
- determine if CAHPS survey results and reports help purchasers and consumers select a health plan.

Harvard, RTI, RAND, Westat, and their contractors and partners brought different viewpoints, research experience, and expertise to the project. AHCPR's strategy in funding these organizations was to capitalize on this diversity by forming collaborative teams to develop each major CAHPS component. Teams were formed to focus on questionnaire development, reporting product development, and evaluation. These teams worked together to ensure consistency in language, design principles, and other technical elements within and across all components. Once a questionnaire was developed and overall CAHPS design principles articulated, each institution took the lead in modifying the questionnaire and reporting products for specific populations. The result was a group of closely related CAHPS 1.0 surveys (such as Adult Commercial, Child Medicaid, and Medicare managed care CAHPS), all of which utilize a series of core questions.

After the development of the 1.0 surveys, the CAHPS development team worked in 1997 and 1998 with several demonstration sites. The goal of these process evaluations was to learn where CAHPS processes and procedures needed refinement when sponsors used them. One of the key issues addressed by the process evaluation was the adequacy of the questionnaires, in format and content, in meeting sponsor needs. In other words, did CAHPS information help consumers and benefits managers choose the best possible health plan appropriate for their circumstances? The team conducted surveys and focus groups before and after open enrollment periods to answer that question, specifically exploring:

- how knowledgeable respondents were about their health plan options;
- how knowledgeable respondents were about differences among plans after they reviewed CAHPS results;
- how confident respondents were that they made the best choice from the available plans;
- which sources of information consumers use to choose a health plan, and the importance of each of these sources;
- how useful consumers find different reporting formats for health plan information.

The CAHPS development team also tested some methodological issues in the demonstration sites (e.g., whether response rates differed by mail or telephone, and whether responses vary systematically with one method or the other). Based on these and other evaluations, the instrument was improved (some questions were omitted, rephrased, or added), resulting in CAHPS 2.0 surveys. Washington State used the CAHPS 2.0 instrument in both 1998 and 1999.

The Survey Instrument

Different CAHPS surveys have different numbers of questions: FFS Adult=62, Healthy Options Adult=74, FFS Child=68 and Healthy Options Child=86. All survey instruments cover the following general topics:

- Getting Care Quickly
- Getting Needed Care
- Doctors Who Communicate Well
- Courteous and Helpful Office Staff
- Customer Service

Additional questions give respondents the opportunity to evaluate their experiences overall and to rate their satisfaction with care provided. The questionnaire also includes questions about utilization of services, health status, and demographics.

This report presents data for four general types of survey questions:

- Questions that ask respondents to rate aspects of their care from 0 to 10, where 0=Worst possible and 10=Best possible;
- Questions that ask respondents how often something happened for which respondents could choose Never, Sometimes, Usually, or Always;
- Questions that ask respondents how much of a problem, if any, it was to get certain services, for which respondents can answer A Big Problem, A Small Problem, or Not A Problem;
- Questions that ask whether something happened for which respondents could choose Yes or No.

Data collection

Sample size and response rate targets

MAA identified 1200 adults from each plan and 866 children from each plan. In some cases, the number of eligible members in a health plan was less than this, so questionnaires were mailed to all eligible members. The response rate target was 50%.

Sample selection and eligibility criteria

The data for the Medicaid CAHPS Survey were collected and processed by Datastat, an independent survey vendor, using a randomly selected sample drawn by MAA.

To be eligible, respondents had to meet survey eligibility criteria as prescribed by CAHPS 2.0H which includes, but is not limited to:

- 6 months continuous enrollment in the same health plan since 1/1/99 for Healthy Options Health Plan members, and 6 months' continuous enrollment on Medicaid since 1/1/99 for FFS clients.
- The Healthy Options Health Plan adult sample consisted of members 18 years or older at the time of the survey; the sample for children consisted of members who were 12 years and younger. The FFS adult sample consisted of adults 18 years and older, and for the FFS children there were two samples drawn (one sample was 12 years and younger, the other was between 13-17).
- FFS excluded persons who were dual eligible for Medicare and Medicaid.
- Clients whose primary languages were English and Spanish were included.

Survey Implementation

The survey was conducted between July and October 1999. It was a multi-wave survey, and 2 attempts were made to reach respondents via mail and 6 attempts were made via telephone. Both cover letters, reminder postcards and surveys contained a toll-free 800 number. Spanish speaking recipients were pre-identified by MAA. The table below describes all stages of survey implementation.

Telephone calls to those mail non-respondents were used to supplement the mailed response rate and were stopped shortly after the targeted 50% response rate was achieved per HEDIS 1999 CAHPS 2.0H specifications. This telephone survey methodology does not identify ineligible respondents; thus, response rates are adjusted only for eligibility criteria collected from the mailings.

Table 1. **Survey Implementation Timeline**

Task	Dates
Pre-notification letters sent to 22,527 prospective respondents in nine MCO health plans and one FFS sample	July 9, 1999
First survey mailing to 22,527 prospective respondents	July 14, 1999
Initial Thank You/Reminder postcard mailing to 22,527 prospective respondents	July 23, 1999
Second survey mailing to 16,646 non-respondents	August 17, 1999
Second Thank You/Reminder postcard mailing to 16,646 non-respondents	August 31, 1999
Phone follow-up conducted with non-respondents	September 8 to October 17, 1999
<i>Note: Mailing of Spanish surveys included in all mailings</i>	

Sample Disposition

The table below shows the final sample disposition. Of a total of 22,527 members, 2,102 were removed from the base of eligible respondents because they were deceased, had undeliverable addresses, had language barriers, or because they reported they were no longer enrolled in the health plan. The adjusted response rate when ineligible members* were excluded was 52.8%

Table 2. **Sample Disposition**

	Healthy Options:		FFS:		TOTAL:	
Original sample	19,506		3,021		22,527	
Deceased, undeliverable, language barriers, no longer enrolled in plan	1,893		209		2,102	
Total Eligible Respondents	17,613		2,812		20,425	
Response per survey stage	<i>Number of recipients</i>	<i>Number of respondents</i>	<i>Number of recipients</i>	<i>Number of respondents</i>	<i>Number of recipients</i>	<i>Number of respondents</i>
First mailing	19,506	5,447	3,021	1,159	22,527	6,606
Second mailing	14,646	1,922	2,000	345	16,646	2,267
Telephone*	11,189	1,696	1,167	211	12,356	1,907
Spanish survey (subset of 1 st and 2 nd mailings and phone cases)	1,242	351	58	34	1,299	385
Total Number of Respondents	9,065		1,715		10,780	
Final Adjusted Response Rate*	51.5%		61.0%		52.8%	

*Telephone calls to those mail non-respondents were used to supplement the mailed response rate and were stopped shortly after the targeted 50% response rate was achieved per HEDIS 1999 CAHPS 2.0H specifications. This telephone survey methodology does not identify ineligible respondents; thus, response rates are adjusted only for eligibility criteria collected from the mailings.

Data Analysis

Scoring of composites

Composite scores are displayed to provide summary information about a range of questions on a topic. Most of the bar charts in the report represent a range of responses. For charts reporting questions with never/sometimes/usually/always responses, “sometimes” and “never” were grouped together; “usually” and “always” were presented separately. When several questions were summarized, all responses across all questions within a composite were examined. In the “Getting Care Quickly” composite, one question is framed in a negative way (i.e. “Never” is a positive response). For the composite scoring, responses on this question were flipped (i.e. the “Never” response becomes “Always”).

The “never” and “sometimes” responses in the stacked, 3-category bar chart were combined to simplify the presentation of data. Results from repeated demonstrations of the CAHPS survey instruments indicate that the “never” response option is seldom selected by respondents. Combining “never” and “sometimes” results in no loss of information. Typically, less than 5% of the respondents select the “never” response to questions such as, “how often did doctors or other health providers listen carefully to you?”

Combining the “always” and the “usually” responses would result in severe loss of information. In CAHPS demonstration projects, about 50% of respondents stated that their health care providers “always” listen, explain, and respect their comments. Another 20% stated that their providers “usually” listen, explain, and respect their comments. Combining these categories would reduce the ability to discriminate performance on these items in the CAHPS survey. In other words, important information about health plans that consumers can use to examine plan performance is contained in the top two responses to the never/sometimes/usually/always questions.

Significance testing

For Healthy Options plans, statistically significant differences were calculated based upon the case-mix adjusted means of the categories of responses (1-3), not on the adjusted frequency distribution of the unadjusted responses.

Stars were assigned to adjusted health plan scores to indicate whether the plan was significantly better or worse than the mean of all plans in the state. Three stars represent a score better than the survey average, two stars average, and one star represents a score below the survey average. When interpreting statistical differences it is important to remember that the plan means have been case-mix adjusted and the sample size for each plan varies.

Significant differences were determined using two statistical tests. First, an F-test was conducted to determine if any of the adjusted plan means differ significantly from the other plan means in the state. This preliminary test offers some protection against giving a plan three stars or one star due to random fluctuations in the sample when there may truly be no meaningful inter-plan differences. If the F-test indicates that there were differences, then t-tests were performed to determine if the mean for each plan was different from the overall mean for all plans in the state. P-values less than 0.05 were considered statistically significant.

Only the means of the categories of responses were case-mix adjusted. Linear regression modeling techniques were used to adjust the means by age, education, and self-reported health status.

FFS is a single plan and should not be compared to Healthy Options plans (see page D2), thus no statistical tests were performed.